



EVIDENCE FOR TILTING PORTFOLIOS TOWARD QUALITY DURING MARKET DOWNTURNS

By StarMine Research Team

Abstract

In this Research Note, we'll explore in more detail the validity of the adage "flight to quality." The hypothesis is that during times of fear or uncertainty in the markets, institutional investors typically have to maintain market exposure as part of their mandate, but may shift their holdings toward lower-risk securities.

In this paper, we'll examine if this behavior actually occurred during several market sell-offs. We use the StarMine® Earnings Quality (EQ) stock ranking model from Refinitiv (Gaumer et. al., 2009) throughout this Research Note as the measure of "quality."

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1. Earnings quality performance during market downturns

In this study, we performed a test examining the performance of a quality factor from the “official” beginning to end of recent bear markets and prolonged corrections – those times when the downturn didn’t descend to a level that is called a bear market (-20% or more).

StarMine EQ is designed to measure the sustainability of a company’s sources of earnings. It is an enhanced version of the Accrual Anomaly (Sloan, 1996).

We examine the performance of the StarMine EQ, starting at the time of the correction, rebalancing the portfolio monthly, excluding transaction costs. Results were calculated with the backtest capabilities of the [Refinitiv QA Point](#) product, developed in partnership with platform developer Elsen Inc.

To capture those dates, we turn to economist and strategist Edward Yardeni¹. He includes a table of S&P 500 Bear Markets and Corrections since 1928 in [Appendix 15.4](#) of his [new book](#)². With permission, those since 1998 are shown as Exhibit 1.

Exhibit 1.

Start date	End date	Days
17-Jul-98	31-Aug-98	45
16-Jul-99	15-Oct-99	91
24-Mar-00	9-Oct-02	929
27-Nov-02	11-Mar-03	104
9-Oct-07	9-Mar-09	517
23-Apr-10	2-Jul-10	70
29-Apr-11	3-Oct-11	157
21-May-15	25-Aug-15	96
3-Nov-15	11-Feb-16	100
26-Jan-18	8-Feb-18	13
Red = Bear Mkt		
Black = Correction		

For our test, we chose the four longest downturns:

Mar-00 - Oct-02:

Tech Bubble bursts

Oct-07 - Mar-09:

Subprime Mortgage Crisis and Great Recession

Apr-11 - Oct-11:

Global market sell-off post downgrade of U.S. sovereign credit rating

Nov-15 - Feb-16:

China stock market crash

¹ Yardeni Research.

² Predicting the Markets: A Professional Autobiography, Edward Yardeni, 2018.

Exhibit 2. Annualized Earnings Quality Returns vs. S&P 500

	S&P 500						
Start date	Top	Bottom	Spread	Annualized	Sharpe	Bmark	Universe
17-Jul-98							
16-Jul-99							
24-Mar-00	-7.26	-39.57	46.74	15.47	0.85	-47.38	-24.41
27-Nov-02							
9-Oct-07	-51.47	-71.09	58.72	36.07	2.04	-55.25	-59.91
23-Apr-10							
29-Apr-11	-20.15	-28.01	9.89	17.55	2.32	-18.64	-22.67
21-May-15							
3-Nov-15	-9.97	-20.19	11.93	40.24	7.09	-12.71	-14.67

Source: Refinitiv QA Point, Refinitiv StarMine, S&P

The results of this test support the hypothesis. Cumulative top decile returns significantly beat the equal-weighted universe in all sample periods and an absolute-return strategy using top/bottom decile spreads is alpha generative. Bottom decile, or poor-quality stocks had especially negative returns versus the overall universe. Filtering out low-quality securities during market downturns appears to be especially beneficial as a method of risk mitigation reducing portfolio volatility and improving risk-adjusted returns. (Note that spreads are rebalanced and compounded monthly and not just calculated as top decile minus bottom decile.)

The performance of StarMine EQ over the entire history sample of January 1998 to March 2018 showed an annualized decile spread of 7.51% and a Sharpe ratio of 0.55. During each of these four major corrections, both the annualized decline spreads and Sharpe ratios were significantly above those performance measures over the entire 1998 to 2018 history. The EQ Model performed better than average during downturns. This appears to validate that a flight to quality behavior does occur during market corrections and that investors benefit from a quality tilt in their portfolios during those times.

2. Evidence of earnings quality based outperformance in global markets

To this point, the focus has been on U.S. market data and indices. This was to both align U.S. data and correction dates with a U.S. index and also because beating the S&P 500 is one of the toughest challenges and competitors for active managers.

However, market downturns in the U.S. are frequently correlated with global sell-offs. You can see that occurred in each of our four downturn periods by the negative benchmark and equal-weighted universe returns in Exhibit 3. Correlations of cross-market returns during major market downturns often increase. This is often referred to as market contagion. For that reason, and for the benefit of our global asset management community, this study next examines returns using the constituents of the MSCI World index as the benchmark.

Exhibit 3. StarMine EQ Performance vs. MSCI World

	MSCI						
Start date	Top	Bottom	Spread	Annualized	Sharpe	Bmark	Universe
17-Jul-98							
16-Jul-99							
24-Mar-00	-23.88	-44.45	33.854	11.55	1.17	-42.07	-29.66
27-Nov-02							
9-Oct-07	-53.42	-68.00	39.68	24.96	2.98	-49.29	-58.13
23-Apr-10							
29-Apr-11	-17.44	-25.37	9.85	17.48	3.01	-17.01	-20.19
21-May-15							
3-Nov-15	-12.00	-20.64	10.15	33.64	11.29	-9.75	-15.58

Source: Refinitiv QA Point, Refinitiv StarMine, MSCI

Results are consistent with those run against the S&P 500, with cumulative top decile returns beating the equal-weighted universe in each period and generating consistently strongly positive annualized decile spreads. These results were achieved with especially good risk-adjusted returns. Sharpe ratios are quite good in each period. Again, we note the significant degree of underperformance among bottom decile constituents.

3. Summary

We discovered convincing evidence of a “flight to quality” during market downturns and that by tilting a portfolio to a quality factor or adding it as a filter to new-idea generation screens we can greatly improve performance during those times.

4. References

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Sloan, R. 1996. Do Stock Prices *Fully Reflect Information in Accruals and Cash Flows about Future Earnings?* The Accounting Review, Vol. 71, No. 3

Yardeni, E. 2018. *Predicting the Markets: A Professional Autobiography*.

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